UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,588	07/28/2003	Jeffrey K. Drogue	6970.02	4659

7590 05/14/2008

David E. Bruhn
DORSEY & WHITNEY LLP
Intellectual Property Department
50 South Sixth Street, Suite 1500
Minneapolis, MN 55402-1498

EXAMINER	
BOGART, MICHAEL G	

ART UNIT	PAPER NUMBER
3761	

MAIL DATE	DELIVERY MODE
05/14/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/628,588	DROGUE ET AL.	
	Examiner	Art Unit	
	MICHAEL G. BOGART	3761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *31-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *31-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

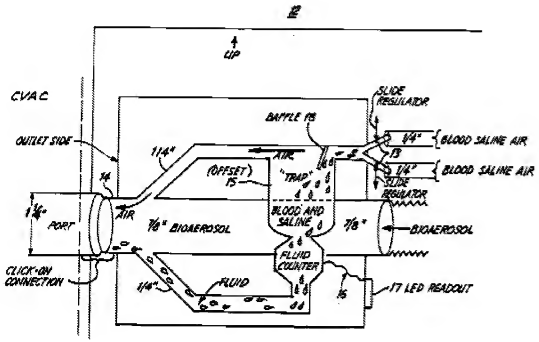
Claim Rejections 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. § 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 43 and 44 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 43 recites an air pathway from the inlet to the separation chamber and a fluid pathway from the inlet to the separation chamber, the fluid pathway being separate from the air pathway. The instant invention only discloses a single pathway from any of the individual inlets (13) **to** the separation chamber (15)(see applicant's figure 2, infra).



Claim Rejections – 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 31, 32, 36, 37 and 39-44 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ciavattoni *et al.* (US 3,665,682; hereinafter "Ciavattoni").

Regarding claim 31, Ciavattoni teaches a vacuum system comprising:

a vacuum source (28, 30, 32, 68);

a connector (54, 68) comprising an inlet, an outlet in communication with the vacuum source (28, 30, 32), a separation chamber (68) in communication with the inlet, an air pathway (72, 73, 74, 70, 78) in communication with the separation chamber (68) and the outlet, and a fluid pathway (100) separate from the air pathway (72, 73, 74, 70, 78) and in communication with the separation chamber (68);

an end effector (12, 14, 16) in communication with the inlet; and

a removable decontamination unit (70) capable of being coupled to the connector (54, 68)(col. 2, line 69-col. 3, line 25)(see figures 1, annotated figure 2, and figure 5, infra).

Regarding the outlet being in communication with the vacuum source (28, 30, 32), Ciavattoni teaches that the vacuum source (28, 30, 32) is in fluid communication with the outlet as indicated in annotated figure 2, infra.

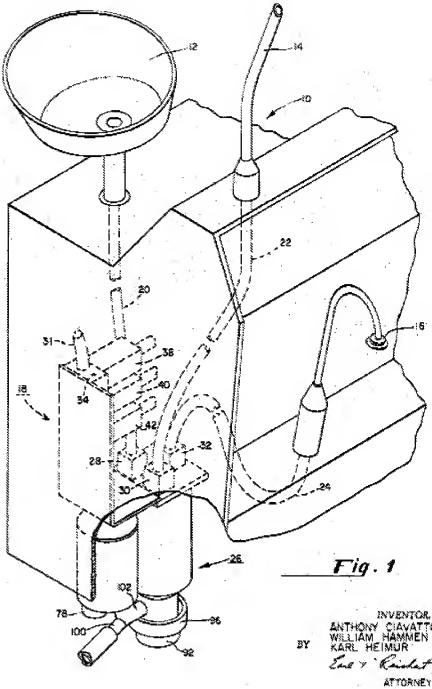
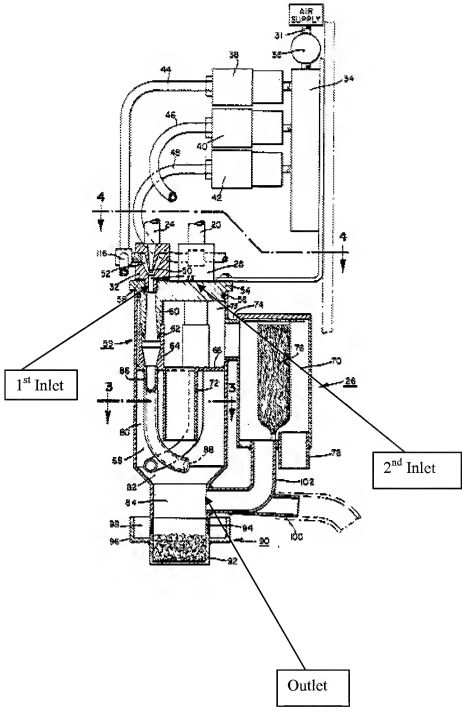


Fig. 1

INVENTOR.
ANTHONY CIAVATTONI
WILLIAM HAMMEN
KARL HEIMUR
BY
ATTORNEY.


1st Inlet
2nd Inlet
Outlet

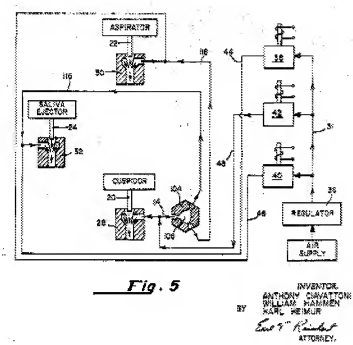


Fig. 5

Regarding claim 32, the decontamination unit (70) may be collapsed under sufficient externally applied force.

Regarding claim 36, Ciavattoni teaches that the vacuum source (28, 30, 32, 68) includes a centrifugal separator (68)(col. 2, lines 11-33; col. 3, line 11-col. 4, line 7). Positive air pressure flowing through the venturi into separation chamber (68) create a vacuum in lines (20, 22, 24).

Regarding claim 37, Ciavattoni teaches an inlet (30).

Regarding claim 39, Ciavattoni teaches a collection chamber (92) in communication with the separation chamber (68).

Regarding claim 40, Ciavattoni teaches a pressure regulator (36) that effectively regulates the vacuum level that occurs upstream of venturis (28, 30, 32)(col. 2, line 69-col. 3, line 25).

Regarding claim 41, Ciavattoni teaches a baffle (66, 72) in cooperation with the inlet.

Regarding claim 42, Ciavattoni teaches a filter (76).

Regarding claim 43, Ciavattoni teaches a vacuum connector (54, 68) capable of being operably coupled to a vacuum source (28, 30, 32), the vacuum connector (54, 68) comprising:

one or more inlets, at least one of which is adapted to be operably coupled with an end effector (12, 14, 16);

an outlet adapted to be operably coupled with the vacuum source (28, 30, 32);

one or more separation chambers (68) in communication with one or more of the inlets (1^{st} or 2^{nd} inlet);

an air pathway from the (1^{st}) inlet to the separation chamber (68) and then to the outlet;

a fluid pathway from the (2^{nd}) inlet to the separation chamber (68), the fluid pathway being separate from the air pathway; and

a removable decontamination unit (70) capable of being (fluidically) coupled to an inlet of the connector (54)(see annotated figure 2, supra).

Regarding the limitation where the outlet is operably connected with the vacuum source, the outlet is in fluid communication with the vacuum source provided at venturi (28) and lines (20). A positive pressure of air flows unimpeded from venturi to the outlet.

Regarding claim 44, Ciavattoni teaches a baffle (66, 72) in cooperation with the inlet (64).

Claim Rejections – 35 USC § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. § 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. § 102(e), (f) or (g) prior art under 35 U.S.C. § 103(a).

3. Claims 33 and 38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ciavattoni as applied to claim 31 above, and further in view of Goosen (US 5,019,060).

Ciavattoni does not expressly teach a measuring device.

Regarding claim 38, Goosen teaches a flow volumetric flow indicator (26)(figure 2, infra).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to add the flow indicator of Goosen to the evacuation apparatus of Ciavattoni in order to provide a means of monitoring the flow rate of the system.

Where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement," the claim is unpatentable under 35 U.S.C. § 103(a). *Ex Parte Smith*, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007)(citing *KSR v. Teleflex*, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)). Accordingly, Applicant claims a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent persuasive evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. § 103(a). *Ex Parte Smith*, 83 USPQ.2d at 1518-19 (BPAI, 2007)(citing *KSR*, 127 S.Ct. at 1740, 82 USPQ2d at 1396). Accordingly, since the applicant[s] have submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. § 103(a) because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement.

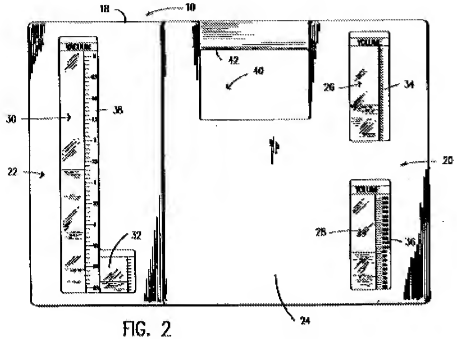


FIG. 2

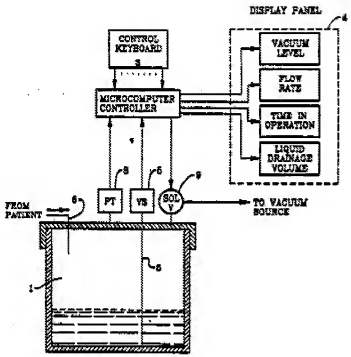
Regarding claim 33, Ciavattoni in view of Goosen do not expressly disclose a flow meter.

Merely automating a prior art process is not sufficient to patentably distinguish a claimed invention if no unexpected result can be demonstrated. See *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958) (Appellant argued that claims to a permanent mold casting apparatus for molding trunk pistons were allowable over the prior art because the claimed invention combined "old permanent-mold structures together with a timer and solenoid which automatically actuates the known pressure valve system to release the inner core after a predetermined time has elapsed." The court held that broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art.). MPEP § 2144.04. In the instant case, applicants have added electronic calculating means to a flow meter, which can automatically calculate flow rates, etc. This is simply an automation step over the manual calculations which may be performed by the combination of Ciavattoni and Goosen.

4. Claims 34 and 35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ciavattoni and Goosen in view of Walker (US 5,195,995 A).

Ciavattoni in view of Goosen do not expressly teach a key pad input device.

Walker teaches a keyboard (3) for controlling a medical suction apparatus (see figure 1, infra).



At the time of the invention, it would have been obvious for one of ordinary skill in the art to add the keyboard of Walker to the evacuation apparatus of Ciavattoni in view of Goosen in order to provide a means of controlling the air pressure and vacuum applied to a patient. See *Ex Parte Smith,* supra.

Response to Arguments

Applicant's arguments filed 14 January 2008 have been fully considered but they are not persuasive.

5. Applicants assert that Ciavattoni does not disclose a connector comprising an outlet in communication with the vacuum source. Applicants further assert that Ciavattoni's vacuum source is located in the pathway prior to the inlet. This argument is not persuasive because the instant invention does not require a vacuum source at or downstream of the inlet of the separation chamber. Ciavattoni does indeed teach an outlet in fluid communication with the vacuum source as there is nothing to impede fluid communication of fluid from the inlet to the outlet (see annotated fig. 2, supra).

6. Applicants assert that Ciavattoni does not disclose a decontamination unit and that Ciavattoni's filtering chamber and means (70, 76) is not a decontamination unit. This argument is not persuasive because Ciavattoni's filtering unit removes particulates from air passing therethrough prior to exiting the device. In this case, such particulates may be reasonably construed as contaminates as they may be biohazard wastes contaminates.

7. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the decontamination unit includes a decontaminating solution) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

8. Applicants assert that Ciavattoni does not disclose a removable decontamination unit. This argument is not persuasive because Ciavattoni's exhaust unit (70) can be removed from the rest of the device at least by disconnecting or severing lines (74) and (102)(see fig. 2).

9. Applicants assert that neither Ciavattoni, Goosen or Walker disclose a decontamination unit adapted to be coupled to a connector. This argument is not persuasive because Ciavattoni teaches an exhaust unit (70) that is coupled to a connector (54, 68)(see fig. 2).

10. Applicants assert that assert that the references do not teach that exhaust means is collapsible. This argument is not persuasive because the exhaust chamber of Ciavattoni is inherently collapsible when sufficient force is applied. Applicants' specification does not provide a specific definition of "collapsible" that precludes a broad interpretation of the term. [T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer." *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342,1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999).

11. Applicants assert that none of Ciavattonis' venturi inlets can be considered a separate bioaerosol inlet. This argument is not persuasive because the venturi inlets are separate from each other and any one of which is capable of passing a bioaerosol therethrough.

12. Applicants assert that Ciavattonis' elements (66) and (72) are not a baffle for optimizing separation of liquid and gas. This argument is not persuasive because these walls assist in keep liquid out of the exhaust pathway and aid in guiding gas into it.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bogart whose telephone number is (571) 272-4933.

In the event the examiner is not available, the Examiner's supervisor, Tatyana Zalukaeva may be reached at phone number (571) 272-1115. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300 for formal communications. For informal communications, the direct fax to the Examiner is (571) 273-4933.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-3700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael G. Bogart/
Examiner, Art Unit 3761

/Nicholas D Lucchesi/
Supervisory Patent Examiner, Art Unit 3763